Field Report
Oregon Caves National Monument

1.0 Summary

The Oregon Caves National Monument (the Monument) has one of the oldest natural caves in North America. The discovery of Ice Age fossils, along with the recent discovery of grizzly and mountain lion-sized footprints, are likely to suggest that Ice Age mammals entered the cave by an opening that has since been sealed, allowing the bones to be preserved in the undisturbed cave environment. The Monument is significant for its representation of back-arc basin geology and its close association with ancient volcanic activity. The unusual rock exposures and predominant regime of tectonic activity throughout its history makes it the only "show" cave with a diversity of rock types. It also contains old growth trees near the pristine headwater tributaries of the Illinois River, one of the last major, undammed rivers in the Pacific Northwest that is open to spawning salmon and steelhead.

The Monument was founded in 1907, by the order of the Secretary of Interior. Until 1933, the lands surrounding the Monument were administered and managed by the U.S. Forest Service (USFS). In July 1933, Executive Order 6166 transferred the administration of the Monument to the NPS. In 1922, the Oregon Caves Highway (Highway 46) was completed to allow for easier access into the rugged topography of the Monument. To this day, the two-lane Highway 46 remains the only road with vehicular access into the Monument. The steep and winding road makes it difficult to access the site by motorized vehicle, with frequent accidents and delays during peak periods. Because of limited parking capacity and high visitation during the peak season, there is a great need to manage parking demand and the use of the facilities, especially the cave tours.

Potential alternative transportation systems (ATS) for the Monument are:

- **Employee shuttle service.** To help reduce congestion and address long-term parking constraint issues, a feasible ATS would involve the implementation of an employee shuttle service. An employee shuttle system during the peak season between Cave Junction and the Monument would reduce non-visitor vehicular traffic and free-up, and therefore increase, parking capacity for Monument visitors. Fewer employee vehicles within the Monument and their potential restriction from the road that leads from the main parking lot to the Chateau would also create a safer environment by reducing the potential for pedestrian-vehicular conflicts. It would also reduce congestion on the only access road (Highway 46) into the Monument during heavy visitation days and also reduce negative environmental impacts to natural resources within Monument boundaries.

- **Visitor shuttle service.** As demand warrants, the employee shuttle service could potentially be expanded to transport visitors from the Illinois Valley Visitor Center to the Monument for the cave tours. Visitors arriving at the Illinois Valley Visitor Center would park their cars at a staging area near the visitor center, purchase a shuttle ticket, and board the shuttle for a relaxed ride to the Monument. This would encourage visitors to leave their cars at Cave Junction and help reduce vehicular traffic and the associated stress of driving up Highway 46. It would also reduce the need to expand any parking facilities on-site, which as a result of the topography and tendency for landslides, would be costly to build and difficult to maintain.

2.0 Background Information

2.1 Location

Oregon Caves National Monument is located 20 miles southeast of Cave Junction and 50 miles south of Grants Pass within the Siskiyou Mountains of southern Oregon. The California-Oregon border is seven miles to the south and the Pacific Ocean is 40 miles to the west. The Monument can be accessed via U.S. 199 to the end of Oregon State Highway 46 (Caves Highway). Highway 46 is narrow and the terrain is mountainous with sharp curves and narrow roadway lane widths.

2.2 Administration and Classification

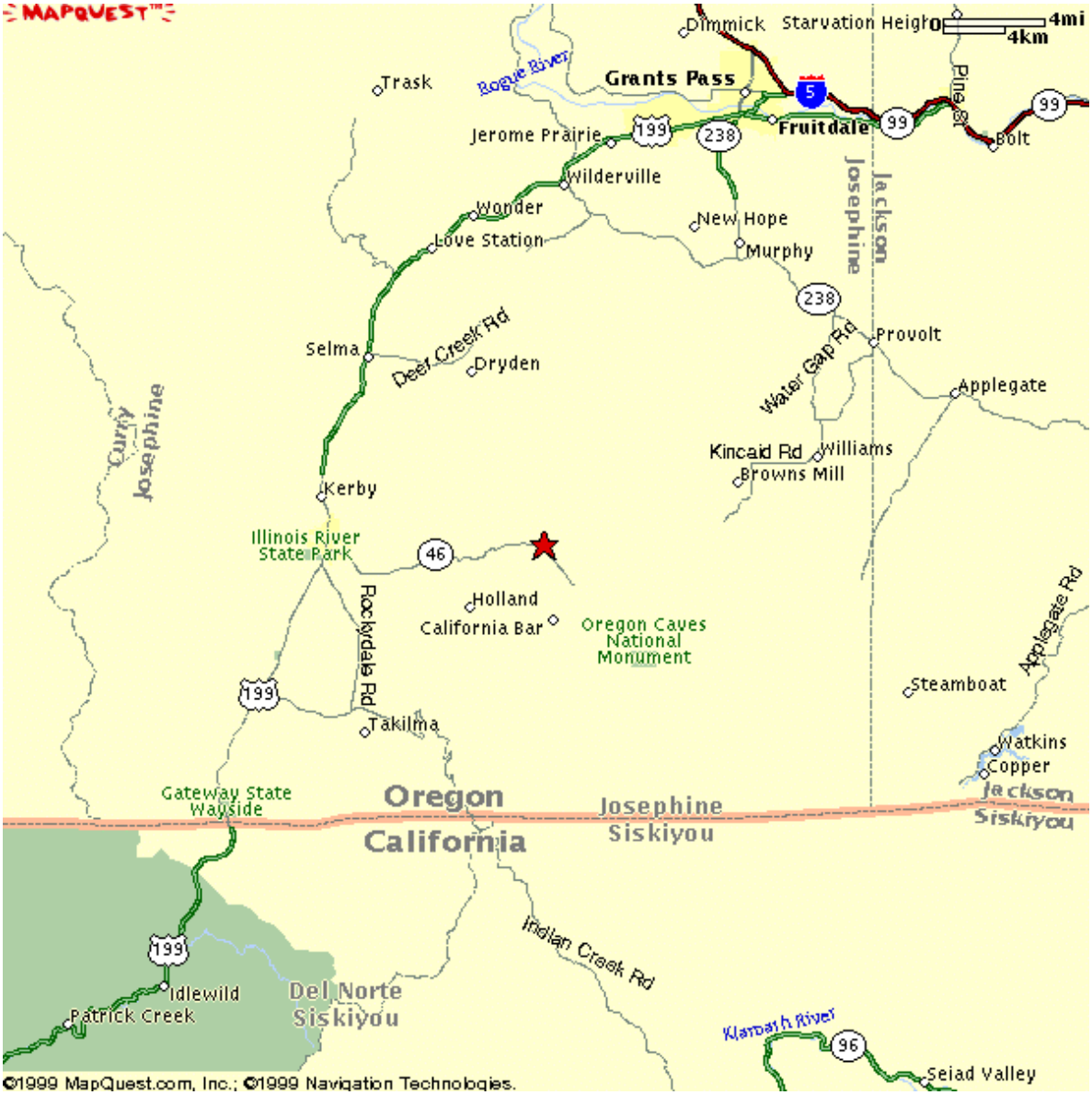
The Oregon Caves National Monument is under the jurisdiction of the NPS of the U.S. Department of Interior. Five buildings – the Chateau, Chalet, Guide Dormitory, Ranger Residence, and Checking and Comfort Station – and their associated landscape features and public use areas are listed in the National Register of Historic Places as a historic district. A variety of agreements exist between the NPS and the USFS. A Memorandum of Understanding (MOU) allows the NPS use, improvement, and maintenance of buildings and associated utilities, as well as the construction and maintenance of additional facilities, on lands managed by the USFS.

Figure 1. Oregon Caves and Chateau Lodge

2.3 Physical Description

The Oregon Caves National Monument is 484 acres, with seven main hiking trails – Cliff Trail, Old Growth Trail, No Name Trail, Big Tree Trail, Cave Creek Trail, Boundary Trail, and the Mountain Meadows Trail. After winter and rainy seasons, Highway 46 (access road) is often plagued by mudslides and washouts and therefore is often closed to private vehicles. Figure 2 shows the location of the Monument in relation to the Oregon-California state boundary.

Figure 2. Location of the Oregon Caves National Monument



2.4 Mission and Goals of the Monument

The mission of the Monument, as listed in the *Oregon Caves National Monument Strategic Plan* for FY 1998 – 2002, included the following elements:

- The Monument's natural and cultural resources and associated values will be protected and maintained within their broad ecosystem and cultural context;
- The Monument will increase and maintain scientific baseline data for use in management decisions;
- Visitors will be provided with a safe experience including access to the diverse and quality facilities, services, and appropriate recreational opportunities provided by the Monument;
- Visitors will be educated to better understand and appreciate the preservation of the Monument's resources and associated values;
- Natural and cultural resources will be conserved through formal partnership programs with local partners including the Illinois Valley Visitor Center and cooperative agreements with the Siskiyou National Forest; and
- The Monument will use effective and appropriate management practices, systems, and technologies to accomplish its mission.

2.5 Visitation Levels and Visitor Profile

Visitation at the Monument has fluctuated in the last 15 years. Visitation ranged from a high of almost 120,000 in 1984 to a low of 86,607 in 1992. However, visitation levels have stabilized in the last few years. For example, visitation was 98,903 in 1996, 85,020 in 1997, and 86,996 in 1998.

According to visitor survey data maintained by the Monument, a typical visitor is likely to be between the ages of 30 and 59. Historical data show that a larger percentage of visitors are from western Oregon locations such as Grants Pass and Portland and northern California locations such as the San Francisco Bay Area. A 1995 visitor survey found that visitors tend to be highly educated, with many having completed college and post-graduate degrees. Income levels of visitors were also high with the mean annual income of a typical visitor at just above $50,000 per year. The same survey also found that a majority of foreign visitors were from Canada and Germany (71 percent and 27 percent respectively). The average party size was 2.4 adults and 2.1 children, suggesting that visitation to the Monument is a family activity, with the cave tour as one of the main attractions.

The survey also found that 66 percent of visitors to the Monument were first-time visitors, while 22 percent were visiting for the second time and 12 percent for the third time. It also found that most visitors were stopping at Oregon Caves en route to other destinations in southern Oregon and that many had also visited other NPS sites.

The 1995 survey found that most visitors were satisfied with the overall experience of the Monument. Although some respondents expressed recalling some degree of crowding during the cave tours, most reported a positive experience at the Monument.

3.0 Existing Conditions, Issues and Concerns

3.1 Transportation Conditions, Issues and Concerns

Access and safety are two major concerns at the Monument. Highway 199, which runs between Grants Pass, Oregon, and Crescent City, California, is the only direct access between I-5 and the California and Oregon coastal areas. It is also the only feeder road to Highway 46 – the main access road to the Monument. As a result, Highway 199 includes a significant level of recreational traffic to destinations in southern Oregon. No current plans are in place to upgrade or widen any of the access roads (Highway 46) into the Monument. During peak periods, traffic on Highway 46 tends to back up from the main entrance down to Lake Creek Bridge, approximately one mile from the Monument entrance (see Figure 3).

Safety is also a main concern on Highway 46 leading into the Monument. The last seven miles of Caves Highway (Highway 46) are very narrow. Large trucks, buses, recreational vehicles (RVs) and private vehicles with trailers are most likely to have difficulty negotiating the final few miles into the Monument. Advisory signs are posted along the highway to alert motorists about the dangers and potential impacts of accessing the Monument using these types of vehicles. Regardless, accidents occur every year from visitors that ignore these advisory signs.

Parking is also an issue for the Monument. During the highest visitation years in the 1970s, the 1975 Master Plan identified parking and transportation access as one of the major problems facing the Monument. The average wait into the Monument can be up to two and one-half hours. In the last few years, however, due to a drop in visitation, the NPS has concentrated its resources on addressing parking and congestion issues in the peak periods during summer months and busy weekends. Since a majority of visitors arrive to the Monument between 11:00 a.m. to 3:00 p.m., parking and congestion during this peak period has been a lingering concern.

Currently, there are two main parking lots on Monument property. The primary parking lot located at the entrance to the Monument, contains 87 spaces (including 78 regular, seven RV, and two handicap spaces). A temporary Monument headquarters building and an information kiosk are also located at this location. The second upper parking area is located at the end of a narrow road that leads from the entrance lot to the Chateau. It has a total of 39 spaces, with 37 regular and two handicap spaces. Both lots tend to fill up during the 11:00 a.m. to 3:00 p.m. peak period. Due to topographical constraints, further expansion of the current parking capacity would not be feasible.

Furthermore, the access road to the second parking lot adjacent to the Chateau is very narrow and has a sharp 90-degree turn. Both automobiles and pedestrians share the narrow

road, which is the only access road to the popular cave tours. Safety at this junction is also a major concern, as the entrance to the Chateau, the Chalet, the cave tours, as well as ranger interpretive programs are all within a few feet of this access road.

Figure 3. Traffic delay on Highway 46 to the Monument

Under the proposed General Management Plan (GMP), parking at the upper lot would be restricted to overnight patrons of the Chateau and persons with disabilities. General visitor vehicular traffic would not be allowed to access this road leading from the main parking lot to the Chateau and Chalet areas. Under this same plan, the access road would be converted to a one-way road with traffic flowing in one direction at a time. A pedestrian walkway is also proposed as part of this plan.

Because of access constraints and limited parking for visitors, as well as for Monument staff and concession employees, the GMP discussed the possibility for a demand-response shuttle service for Chateau lodge patrons and day visitors. It also called for an employee shuttle service that would operate in the morning and late afternoon/early evening from Cave Junction to the Monument. This service would be designed to help reduce congestion and to free up additional parking for visitors.

Roadway maintenance is also a major issue. Large amounts of rain during the winter and spring months bring frequent mudslides and cause the roadway pavement of Highway 46 and the main parking lot facilities to deteriorate at a faster than normal rate. The Lake Creek Bridge, approximately one mile from the Monument, has been recently replaced to

allow access by heavy vehicles such as trucks and buses. Recently, $1.25 million was spent to repair the main parking lot area after the pavement collapsed due to heavy rain. During the winter months, snow also limits access into the Monument. As a result, the NPS is considering closing the Monument in January and February.

3.2 Community Development Conditions, Issues and Concerns

The local community and businesses at Cave Junction are open to working with the Monument to extend the average stay of visitors. They are hoping that visitors will extend their stay when touring the Monument by frequenting local establishments. The Monument is also working with the community to develop an interpretive plan.

3.3 Natural or Cultural Resource Conditions, Issues and Concerns

There are some natural and cultural resource issues related to the Monument including management and use of the buildings and landscapes, and maintenance of the historical integrity of the buildings. For example, several historically registered buildings have been threatened by landslides throughout the last several years. The GMP has suggested the development of management zoning areas (historic, park development, and natural zones) designated to address different management objectives.

Appropriate locations also need to be determined where Monument staff can interact with the public through ranger interpretive programs. The cave, the Monument's primary resource, is currently interpreted by a private concessionaire and not interpreted directly by NPS staff. This may conflict with NPS management policies. The GMP has stated that "direct operation of the interpretive tours would allow the NPS to quickly adapt the interpretive program to changing resource protection and visitor needs." The GMP has also recommended that alternatives for delivery of basic interpretation, such as the use of exhibits and films, should be considered. Furthermore, the GMP has called for the NPS to regain direct control of the operation of the cave interpretive tours.

3.4 Recreation Conditions, Issues and Concerns

The Monument's trail system is not entirely contained within Monument boundaries. Currently, trails exit and reenter Monument boundaries, and the NPS has no control over activities outside of the Monument which might affect these trails. Presently, there are no significant on-site visitor centers at the Monument for visitors to receive basic orientation, learn from interpretive exhibits, view audiovisual programs, ask questions of a ranger, or assemble school groups. The nearest visitor center is 20 miles from the caves at the Illinois Valley Visitor Center at the junction of U.S. 199 and Highway 46. Under current conditions, ranger-conducted programs are limited by space, subjected to the weather, noise, and distractions from passing vehicles accessing the Chateau parking lot. The GMP also calls for a 3,410 acre expansion of the Monument boundary to increase recreational activities and opportunities.

4.0 Planning and Coordination

4.1 Unit Plans

In an attempt to increase the number of hours in the peak visitation period (typically from 11:00 a.m. to 3:00 p.m.), future plans include the institution of a reservation system for the cave tours. Visitors to the Illinois Valley Visitor Center will be required to sign-up for the cave tour before arriving at the Monument. Moreover, the GMP calls for the expansion of the visitor center, in coordination with the visitor center partners. It is envisioned that the visitor center would be the initial point of visitor contact for the Monument where visitors can obtain information and purchase tickets. The emphasis would be directed towards providing alternative activities for visitors waiting for the cave tours or staying longer in the area. The GMP also calls for the lower level of the Chalet to be converted into an on-site visitor center where exhibits and information will be displayed. This visitor center will also serve as a meeting place for commencing cave tours.

4.2 Public and Agency Coordination

The NPS coordinates with the Oregon Department of Transportation (ODOT) on road improvement projects into the Monument. ODOT maintains the main access road (Highway 46) into the Monument, including maintenance and snow removal during winter months. The Illinois Valley Visitor Center near the intersection of U.S. 199 and Highway 46 is maintained jointly by the NPS and four other agencies – the Bureau of Land Management, the USFS, City of Cave Junction and the city's Chamber of Commerce. The Siskiyou National Forest (SNF) also assists the NPS with wildland fire efforts through a cooperative agreement. This agreement also allows NPS staff to respond to USFS fires that threaten the Monument and to provide response and assistance in designated mutual aid areas.

The planned expansion of the Illinois Valley Visitor Center also calls for the NPS to coordinate with the USFS, the Illinois Valley Chamber of Commerce, and other Visitor Center partners to seek funding to build the addition. Monument staff also plans to expand inter-agency cooperation and partnerships by developing Internet capabilities that provides visitors with information about regional opportunities for recreation and tourism in federal, state, and local jurisdictions.

5.0 Assessment of Need

5.1 Magnitude of Need

Depending on the projected future changes in the level of visitation and the number of employees, there may be both short-term and long-term alternative transportation needs at the Monument. In the short term, Monument staff may focus on developing demand management strategies to reduce visitation during the peak periods and to potentially

spread visitor arrival times into the Monument more evenly. This would help reduce the demand for parking and also relieve congestion on Highway 46.

A similar short-term alternative has been cited in the Monument's GMP. It calls for the institution of a scheduled reservation system for the cave tours. This strategy will be designed to reduce the number of vehicles traveling into the Monument during peak periods. It is also designed to reduce the duration that visitors are parked and waiting in the parking lots for the cave tours to begin. In addition, especially if future visitation levels increase, and the parking capacity and transport system supporting the cave tour are both constrained, other long-term strategies will need to be considered. Since the drive to the Monument can be slow and congested and supply of parking is constrained, there may be sufficient long-term need for a visitor demand-response shuttle system. This and other feasible transportation alternatives are presented in the next section.

5.2 Feasible Alternatives

In order to reduce congestion and address long-term parking constraints at the Monument, a feasible alternative system could include the implementation of an employee shuttle service. As demand warrants, this service could be expanded to provide general service for visitors to the Monument. An employee shuttle system during the peak season between Cave Junction and the Monument would reduce vehicular traffic into the Monument and increase parking capacity for Monument visitors. Fewer vehicles within the Monument and their general restriction from the road that leads from the main parking lot to the Chateau would also create a safer environment by reducing the potential for pedestrian-vehicular conflicts. This strategy would also reduce congestion on the access road (Highway 46) during heavy visitation days and reduce negative environmental impacts to natural resources within Monument boundaries. An initial employee survey could be conducted of Monument employees to determine the need for such a service.

As demand warrants, the employee shuttle service could be expanded to include transport of visitors. For example, service could be expanded to take visitors from the Illinois Valley Visitor Center to the Monument for the cave tours. The fare for the shuttle ride could also be included as part of the cost for the cave tour ticket, making it a seamless, one-fare ticket purchase for the visitor. Visitors arriving at the Illinois Valley Visitor Center could park their cars at a staging area next to the visitor center and purchase a ticket to get onto a shuttle for a relaxed ride to the Monument. A prerecorded audio interpretive program/message could also be broadcast on the shuttle to introduce visitors to the Monument. The shuttle ride could also become part of the "total visitor experience" to the Monument. This would encourage visitors to leave their cars at Cave Junction and help reduce vehicular traffic and the stress of driving on Highway 46. It would also reduce the need to expand any parking facilities onsite, which as a result of the topography and tendency for landslides, could be costly to build and difficult to maintain.

6.0 Bibliography

National Park Service. *Oregon Caves National Monument General Management Plan and Environmental Impact Statement, Volume I.* U.S. Department of Interior, National Park Service, Oregon Caves National Monument, November 1998.

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Annual Visitation Reports.

7.0 Persons Interviewed

Craig Ackerman, Superintendent, Oregon Caves National Monument